

BAB V KESIMPULAN

1. Rasio massa adsorbent:volume limbah cair sintesis MG yang menghasilkan persen removal tertinggi adalah 1:100 gram/mL.
2. Suhu adsorpsi yang menghasilkan persen removal tertinggi adalah 60°C.
3. Pada saat awal (0-20 menit) persen removal MG mengalami kenaikan secara drastis, selanjutnya kenaikan tersebut semakin lama semakin kecil hingga konstan pada saat kesetimbangan (120 menit).
4. Persamaan kinetika adsorpsi MG menggunakan TBA dari kulit kayu bakau mengikuti persamaan orde 2 semu sebagai berikut:

$$\text{Linier: Orde 2 semu: } \frac{t}{q_t} = 0,1605 \cdot t + 1,3076$$

$$\text{Non-linier: Orde 2 semu: } q_t = \frac{0,8124 \cdot t}{1 + 0,1312 \cdot t}$$

5. Persamaan isotherm adsorpsi MG menggunakan TBA dari kulit kayu bakau mengikuti persamaan Langmuir sebagai berikut:

$$q_e = 312,5 \frac{0,0154 \cdot C_e}{1 + 0,0154 \cdot C_e}$$

6. Adsorpsi MG menggunakan adsorbent TBA dari kulit kayu bakau merupakan adsorpsi kimia (*chemisorption*).

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